PRICE $5.00

DEC 5 1962

POWER SUPPLY

MODEL 1520

SERIAL A-.....

INSTRUCTION MANUAL

kepco inc.®

131-38 SANFORD AVENUE • FLUSHING 52, N. Y.
Area Code 212 IN 1-7000 • TWX # NY 4-5196

VOLTAGE REGULATED POWER SUPPLY

MODEL 1520

SERIAL A-.....

KEPCO LABORATORIES
131 - 38 Sanford Avenue
Flushing 55, New York

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KEPCO LABORATORIES
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VOLTAGE REGULATED POWER SUPPLY

MODEL 1520

The Kepco Model 1520 features a regulated high voltage power supply with excellent regulation, low ripple content and low output impedance.

SPECIFICATIONS:

OUTPUT VOLTAGE DC: 0-1500 volts continuously variable.

OUTPUT CURRENT DC: 0-200 milliamperes continuous duty.

REGULATION: In the range 30-1500 volts the output voltage variation is less than 1/2% for both line fluctuation from 105-125 volts and load variation from minimum to maximum current.

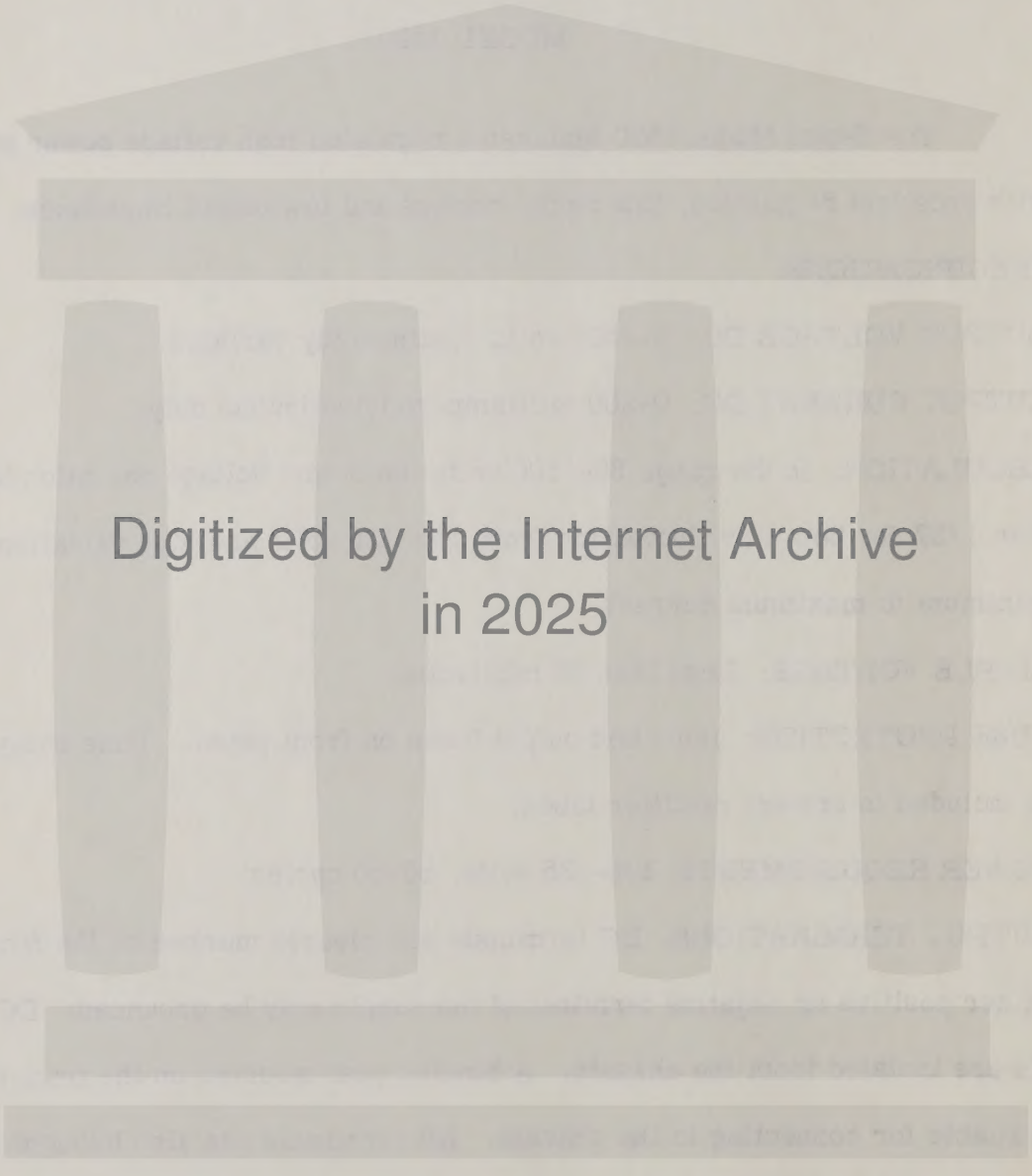
RIPPLE VOLTAGE: Less than 20 millivolts.

FUSE PROTECTION: Input and output fuses on front panel. Time delay relay is included to protect rectifier tubes.

POWER REQUIREMENTS: 105-125 volts, 50-60 cycles.

OUTPUT TERMINATIONS: DC terminals are clearly marked on the front panel. Either positive or negative terminal of the supply may be grounded. DC terminals are isolated from the chassis. A binding post mounted on the front panel is available for connecting to the chassis. All terminals are also brought out at the back of the chassis.

1520/423/ 3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METERS: Voltmeter: 0-1500 volts, 4" rectangular.

Milliameter: 0-200 milliamperes, 4" rectangular.

PHYSICAL SPECIFICATIONS: Cabinet height 22-3/4", width 21-3/4" , depth 15-1/4", color gray, panel engraved. Rack panel height is 21", width 19".

CONTROLS: Power on-off switch, HV on-off switch, HV control.

PROCEDURE FOR TURNING ON POWER SUPPLY: Before turning on the AC power switch, turn the DC voltage control to the extreme left and place the DC switch in the OFF position. Turn on the AC power switch. Allow 45 seconds for the time delay relay to operate. Turn the DC switch on and adjust the voltage to the desired value.

CAUTION: The top and back doors of the power supply cabinet should not be opened during normal operation of the power supply. The exposed high voltage inside the cabinet is dangerous. TAKE NECESSARY PRECAUTIONS.

OPERATING INSTRUCTIONS: The Model 1520 Regulated Power Supply is shipped with all tubes in place and is ready for operation. The DC output voltage range 0-1500 volts is determined by a factory adjustment of two potentiometers, labeled L and H, mounted on the regulator chassis (upper unit). When it is necessary to readjust the voltage limits, the procedure to be followed is:

1. The two potentiometers which control the voltage range have screwdriver adjustments and are locked in position by means of locking nuts. Release the locking nuts on the potentiometers so that the slotted shafts can be easily rotated.

2. Turn the voltage control knob on the front panel to the extreme left and adjust the potentiometer, labeled L, until the voltmeter reads 0 volts (clockwise increases the voltage).

3. Turn the voltage control knob on the front panel to the extreme right and adjust the potentiometer, labeled H, until the voltmeter reads 1500 volts (clockwise increases the voltage).

4. Return the voltage control knob on the front panel to the extreme left. If the voltage is not 0 volts, repeat steps 2 and 3 until the desired range 0-1500 volts is obtained.

5. When the potentiometer adjustments are completed, tighten the locking nuts.

CAUTION: When making above adjustments, extreme care must be taken to avoid contact with the high voltage.

MAINTENANCE: The components of the Model 1520 Regulated Power Supply have been selected and tested to provide long and trouble free operating life. The only service necessary should be the replacement of vacuum tubes. The location of the tubes is clearly marked on the chassis.

REPAIRS: Should any trouble develop in the instrument, it may be serviced with the aid of the schematic diagram. Major repairs, however, are usually handled by the factory. Under no circumstances should the instrument be returned to the factory without proper authorization and shipping instructions. In any correspondence with the factory concerning repairs, the type and serial number of the instrument must be given together with a description of the trouble encountered.

PARTS LIST

MODEL 1520

C1	- 2	MFD	3000 WV
C2	- 0.1	MFD	600 WV
C3	- 2X1	MFD	600 WV
C4	- 0.25	MFD	600 WV
C5	- 2X2	MFD	600 WV
C6	- 0.1	MFD	600 WV
C7	- 0.1	MFD	600 WV
C8	- 4	MFD	2000 WV
C9	- 0.047	MFD	1600 WV
C10	- 0.1	MFD	600 WV
C11	- 2X1	MFD	600 WV
C12	- 0.1	MFD	600 WV
C13	- 2X1	MFD	600 WV
C14	- 0.1	MFD	600 WV
C15	- 0.25	MFD	600 WV
C16	- 0.047	MFD	1600 WV
C17	- 2	MFD	3000 WV

F1	- 8	Ampere Fuse
F2	- 1/4	Ampere Fuse
F3	- 8	Ampere Fuse

L1	- Choke 100-355
L2	- Choke 100-506
L3	- Choke 100-506
L4	- Choke 100-356

M1	- Milliameter 0-200 MA DC
M2	- Voltmeter 0-1500 volts DC

PL1	- Pilot Lamp 6 watt
PL2	- Pilot Lamp 6 watt

R1	- 100	Ohm	1 watt
R2	- 100	Ohm	1 watt
R3	- 47	Ohm	1 watt
R4	- 39,000	Ohm	1 watt
R5	- 100	Ohm	1 watt
R6	- 1.0	Meg	1 watt
R7	- 1.0	Meg	1 watt
R8	- 0.27	Meg	1 watt

R9	- 10 Ohm	1 watt
R10	- 3.6 Meg	1 watt
R11	- 2.2 Meg	1 watt
R12	- 39,000 Ohm	1 watt
R13	- 3,000 Ohm	1 watt
R14	- 1.0 Meg	1 watt
R15	- 1.0 Meg	1 watt
R16	- 27,000 Ohm	1 watt
R17	- 5 Ohm	10 watt
R18	- 10 Meg	1 watt
R19	- Dual 0.5 Meg	2 watt Pot.
R20	- 1.8 Meg	1 watt
R21	- 50,000 POT.	2 watt
R22	- 100 Ohm	1 watt
R23	- 1.0 Meg	1 watt
R24	- 1.0 Meg	1 watt
R25	- 0.12 Meg	1 watt
R26	- 10 Ohm	1 watt
R27	- 3.6 Meg	1 watt
R28	- 10 Meg	1 watt
R29	- 56,000 Ohm	1 watt
R30	- 10,000 Ohm	10 watt
R31	- 50,000 Ohm	20 watt
R32	- 50,000 Ohm	20 watt
R33	- 0.25 Meg	2 watt Pot.
R34	- 50,000 Ohm	100 watt
R35	- 10 Ohm	1 watt

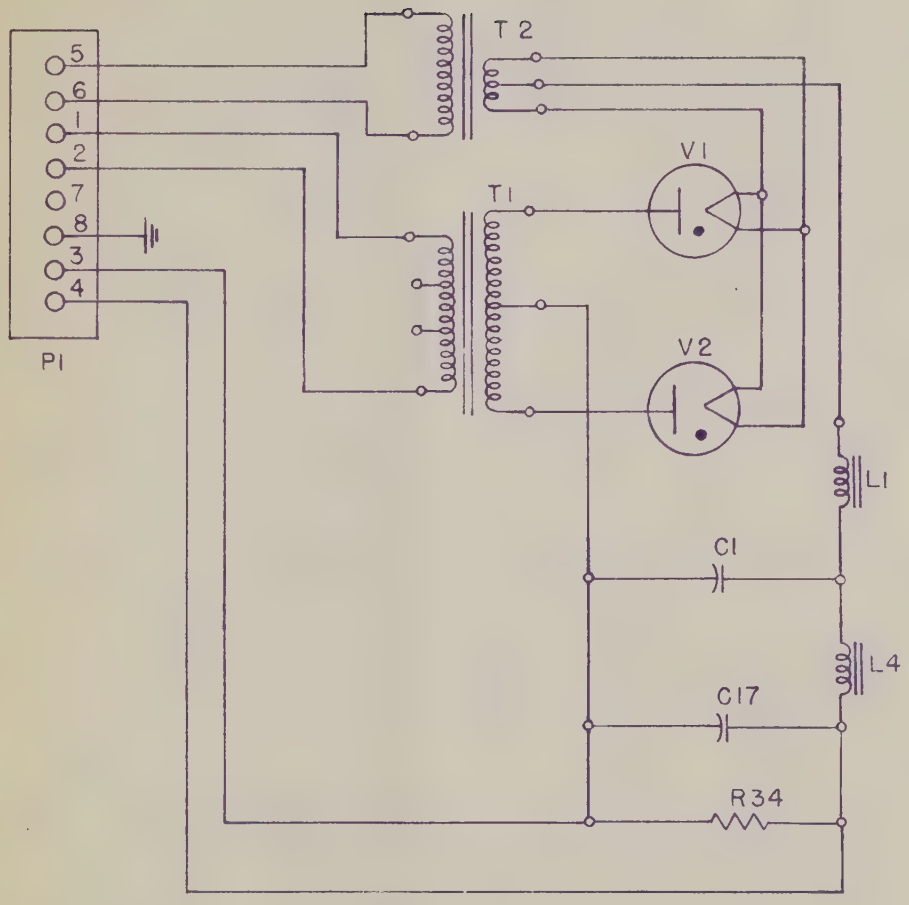
RL1 - DPST Relay

S1 - DPST Switch
S2 - DPST Switch

TD1 - Amperite Time Delay 115NO30T

T1 - Plate Transformer 100-354
T2 - Filament Transformer 100-338
T3 - Filament Transformer 100-294
T4 - Powerstat Type 116U
T5 - Transformer 100-149
T6 - Transformer 100-149

V1	- 866-A
V2	- 866-A
V3	- 5881
V4	- 6W6GT or 6Y6G
V5	- OD3
V6	- 5Y3GT
V7	- 6SL7GT
V8	- OD3
V9	- Amperite 6-4
V10	- Amperite 3-4
V11	- 6SL7GT
V12	- 6Y6GT or 6Y6G
V13	- 5Y3GT
V14	- 6SL7GT
V15	- OD3



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ITEM	MODEL	DATE	DRAWING NO
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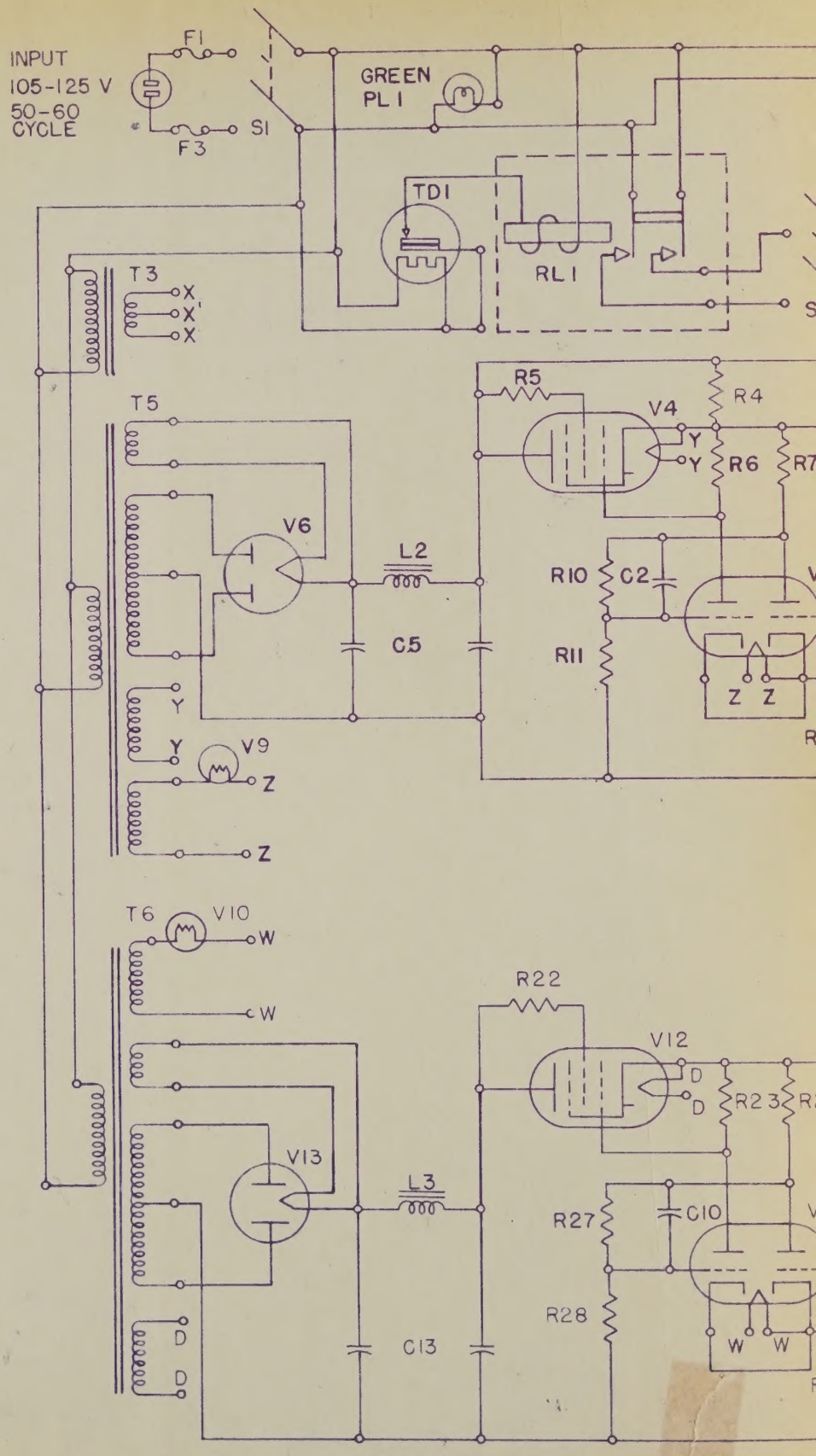
INPUT
105-125 V
50-60
CYCLE
F1
F3
S1
GREEN
PL 1
TD1
RL 1
T3
X
X'
X
T5
V6
L2
C5
R5
V4
R4
Y
Y
R6
R7
R10
C2
R11
Z Z
Y
Y
V9
Z
Z
T6
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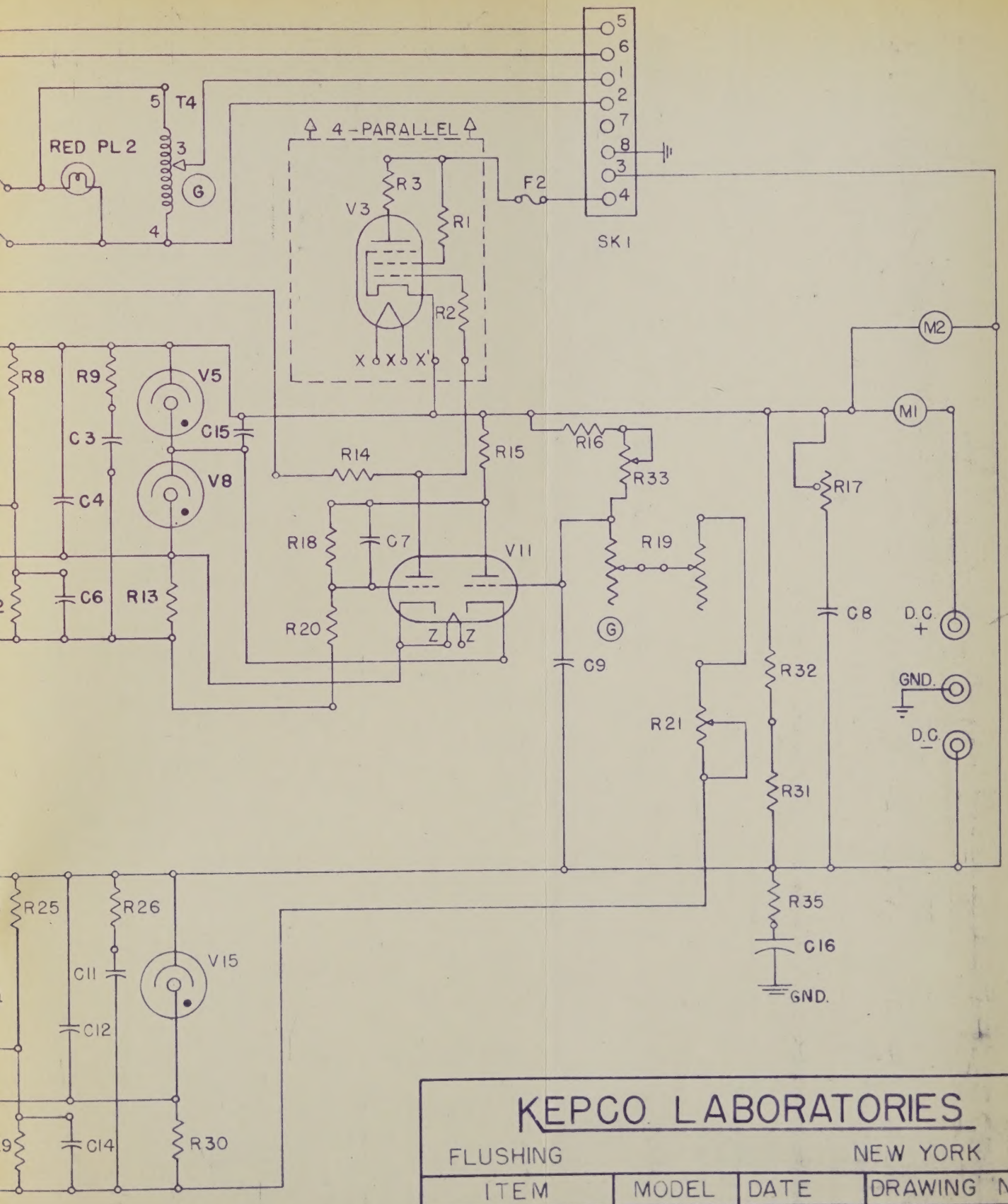

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ITEM	MODEL	DATE	DRAWING NO
REGULATOR UNIT	1520	12-3-52	S-1520-02

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